

## Emergency control of transboundary diseases of livestock in Southern and Eastern Europe

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**ABSTRACT:** As a result of initiating the FAO Technical Cooperation Project TCP/RER/0066 (T): “Emergency Control of Transboundary Diseases of Livestock in Southern and Eastern Europe”, approved in the year 2000 and implemented from September 2001 the CENTAUR is expected to expand significantly. The major objective of this training Regional Project will be to strengthen the national and regional capacities to respond to transboundary animal disease emergencies through technology transfer in the fields of diagnostics, epidemiology and emergency preparedness. The following countries are included in the Project: Albania, Bosnia-Herzegovina (the Federation and the Serbian Republic), Bulgaria, Croatia, FYR Macedonia, Moldova, Romania, Slovenia and Turkey. Southern and Eastern Europe are the strategically important areas especially exposed to Transboundary Animal Diseases (TADs). The CENTAUR’s main task is to facilitate contacts with international centers of excellence and international organizations in order to achieve full compatibility with OIE and EU standards regarding disease control methods. The first CENTAUR Countries: Czech Republic, Hungary, Poland and Slovakia have been CENTAUR members since 1997 following the implementation of the previous FAO TCP Project. From the Baltic countries: Lithuania has recently joined the network and Latvia and Estonia have been encouraged to do so. Also the CENTAUR was joined by the Member: Sankt Petersburg Academy of Veterinary Medicine, Russian Federation (2001). It is expected that the Countries and subscribers of the CENTAUR NEWS FLASH INFO published by the Veterinary Research Institute, Brno will play an active role regarding the dissemination of scientific/professional information, regional cooperation and training. Four workshops to be held and other activities proposed in the project are described.

### BACKGROUND

Livestock and poultry production is an essential part of food security as well as being important both for internal and international trade. Alarming outbreaks of devastating transboundary diseases of livestock (called Transboundary Animal Diseases – TADs) have been recurrent in Europe with a long history of expensive vaccination campaigns and heavy economic losses for the countries involved. This has been proved in cases of numerous outbreaks of foot and mouth disease – FMD, bluetongue – BT, classical and African swine fevers (CSF and ASF), porcine respiratory and reproductive syndrome – PRRS, tuberculosis, paratuberculosis, sheep and goat pox, Newcastle and Gumboro diseases of poultry, or the threat of bovine spongiform encephalopathy/transmissible spongiform encephalopathies – BSE/TSE – to mention the most important. Emergency assistance was

requested by Bulgaria and Turkey following the recent alarming outbreaks of bluetongue in July to August 1999. Also Greece reported bluetongue outbreaks in Euros and Rodopi in August 1999. The mortality of sheep in three infected Provinces of Bulgaria was estimated at up to 2–4% at the end of July, but morbidity was high, reaching 40–60%. The initial action was coordinated by the Government of Bulgaria, in cooperation with Food and Agriculture Organization of the United Nations (FAO), Animal Health Service, Animal Production and Health Division (FAO-AGAH), European Union (EU), World Organization of Animal Health (OIE), particularly the FAO priority programme: Emergency Prevention System for Transboundary and Plant Pests and Diseases – EMPRES (Livestock Component) and the IAH (Institute for Animal Health – UK). The first coordinating meeting with the participation of Veterinary Officers from Bulgaria, Greece, OIE, EU and Institute for Animal Health, UK,

Technical Cooperation Project TCP/RER/0066 (T) by the Food and Agriculture Organization of the United Nations.

took place in Burgas on 4 August 1999. The FAO mission verified the situation immediately after (5–6 August 1999). The EU declared their immediate availability to support the preliminary consultancy missions, cost of reference diagnosis and procurement of disinfectants, and insecticides required, as well as the necessary spray equipment. There was consensus on the need for emergency action that would have a more lasting impact.

The following considerations are relevant:

- Balkan and Southern/Eastern European Countries are in the first line of defense against transboundary animal diseases invading Western Europe from Middle East and Asia and other parts of Europe that would have a destructive impact on the livestock sector both regarding local consumption and food security as well as on exports.
- Ad hoc assistance will not solve the problem of early warning and early reaction, advance contingency planning for TADs which may spread rapidly and unexpectedly causing enormous economic loss.
- The application of modern diagnostic methods for disease surveillance, early warning, early reaction and research is only possible if veterinary services and other relevant parties are conversant with basic notions of modern veterinary epidemiology and epidemiological data management.
- As this is not the case in the described sub-region (results of the FAO evaluation Mission, January 1999) this is now considered as an urgent gap in know-how and has limited compatibility with international standards, which is vital in order to guarantee impact on the many existing interventions on TADs control. Particularly: The concept of modern epidemiology for better diagnosis and vaccines as well as computerized epidemiological data management, assessment of risk factor and use of molecular epidemiology for tracing the sources of infection are not sufficiently appreciated and applied.
- Working contacts of the sub-region with internationally recognised Centres of Excellence and international organizations are very limited.

In the above context, FAO has been requested to fill on an urgent basis the need for training in veterinary biotechnology and modern epidemiology as a vital complement to other ongoing programs. The project will be relevant to the FAO Special Programme for Food Security, now being implemented only in Albania and Bosnia-Herzegovina but having potentials to be developed in the remaining countries of the sub-region. During the last decade the whole sub-region has been heavily affected by political changes, several wars, civil strife and natural disasters: floods, earthquakes, TADs epidemics.

Per capita income (GDP per person) is far below the EU standards reaching in some countries the level of less developed areas.

## PROJECT

The project TCP/RER/0066 (T) “Emergency control of Transboundary Diseases of Livestock in Southern and Eastern Europe” was formulated and approved by the FAO in August 2000. Due to a shortage of operational capabilities its implementation started in September 2001 and will continue for one year until August 2002. Countries participating in the Project are: Albania, Bosnia-Herzegovina (the Federation and Republica Srpska – Serbian Republic), Bulgaria, Croatia, FYR Macedonia, Moldova, Romania, Slovenia and Turkey.

The objective of the Project is to strengthen the national and regional capacities to respond to transboundary animal disease emergencies through technology transfer in the fields of diagnostics, epidemiology and emergency preparedness. Senior national – government veterinary epidemiologists will be trained (training of trainers) in Albania, laboratory diagnosticians in Bulgaria and senior veterinarians involved in disease management – preferably Chief Veterinary Officers or their deputies in Slovenia. A separate training will be the Final Coordinators Meeting (location: to be advised) focusing on reviewing progress made, surveillance network, reporting network, formulation and implementation of national livestock disease contingency planning. The computerised epidemiological data management software: *TAD-info* will be customized, as well as the ArcView project file containing appropriate avenue script distributed and installed. The user manual, digital maps and some post-installation software support will be provided. Modern hardware and software as well as the ELISA – laboratory set and reagents will be provided to selected countries. The Project will strengthen the epidemiology and diagnostic components in the participating countries and will be linked with the FAO Established Veterinary Biotechnology/Epidemiology Network for Central and Eastern Europe.

The Project will initiate a significant and catalytic role in the development of veterinary biotechnology and epidemiology in the sub-region for effective TADs preparedness and control, and will mobilize the use of national resources for further development of technically related and training institutions.

## WORKSHOPS

Under the Project the following Advanced Training Workshops will be implemented (provisional timing):

### 1. Epidemiology Training Workshop

Month 5, Tirana, Albania: one week, 14–18 January 2002

To be attended by one national (government) veterinary epidemiologist and one lecturer in veterinary epidemiology/infectious diseases from each country. The

training will cover basic principles of epidemiology: measures of disease, data collection methods and quality control; data analysis and a brief introduction to National *TADinfo* software. Those attending should have a post-graduate qualification or experience in veterinary epidemiology or be actively involved in livestock disease data collection and analysis, and should have experience in the use of computers and the Windows (95 or above) operating system. The training will last for one working week and will be held in Tirana, Albania.

## 2. Laboratory Diagnostics Workshop

Month 6–7 Sofia, Bulgaria: two weeks, 4–15 March 2002

To be attended by one senior practising laboratory diagnostician from the main veterinary laboratory in each participating country. The workshop will concentrate on the transfer of ELISA technology appropriate to rinderpest, peste des petits ruminants (PPR), foot-and-mouth disease (FMD) and bluetongue (BT). The venue will be the National Veterinary Laboratory, Sofia, Bulgaria. Duration: two working weeks.

## 3. Workshop on Disease Recognition and Contingency Planning Workshop Bluetongue, Foot-and-mouth diseases, Peste des petite ruminants, Rinderpest, and others if required

Month 9, Ljubljana, Slovenia: one week, 13–17 May 2002

To be attended by one senior veterinarian involved in disease management from each country (preferably the Chief Veterinary Officer or his/her deputy). To cover the basic principles of emergency preparedness/contingency planning as emphasised by EMPRES, and the recognition and diagnostic sampling for the TADs.

## 4. Final National Co-ordinator's Meeting/Workshop

Reviewing progress made-especially than on training issues, but training will be given where this is deemed necessary. One week: one week one of the countries of the Region having the best experience on the subject, 17–21 June 2001

To be attended by the National Project Co-ordinators or their deputies from the project countries (one person per country).

## OTHER IMPORTANT ACTIVITIES

- Month 1, September 2001: FAO mission to Moldova and Bosnia and Herzegovina, duration 2 weeks
- Months 5/6, January/February 2002 onwards: installation of Regional *TADinfo* in three requesting countries
- Month 6, February 2002: FAO HQs missions to establish *TADinfo*-based disease surveillance systems in three selected key countries
- Months 6–12, February-August 2002: all countries of the Project; Duration: one working week in each country: *TADinfo* training for national epidemiologists of pilot countries: Training will involve software instal-

lation (*TADinfo* and ArcView) and intensive work on data input and analysis using the country's own data

- Month 8–12, April-July 2002: Visit by laboratory specialist TCCT Consultant to laboratories in Moldavia, Bosnia-Herzegovina and Albania
- Month 12, August: Closure of project.

**FAO arranged Personnel/Trainers** (only the names of already appointed persons were mentioned):

- Regional Project Co-ordinator (TCCT Consultant)
- Input Co-ordinator Epidemiologist, Retired FAO Expert – Consultant: Assoc. Professor Kris J. Wojciechowski
- Expert in Laboratory Diagnostics (TCCT Consultant)
- FAO Headquarters, Rome: AGAH/EMPRES Experts: 1. Animal Health Officer – Epidemiology: Dr. Roger Paskin; 2. Disease Recognition and Contingency Planning; 3. Associate Professional Officer – Epidemiology: Dr. Ledi Pite

## Contracts

- FAO/IAEA (AGE), Vienna, contribution to implementation of the Laboratory Techniques Training Workshop
- Unit (to be identified) to arrange for *TADinfo* customization

**National Project Coordinators:** will be nominated by the Governments (Ministries of Agriculture and relevant) of the participating countries.

**Language of the Training and Training materials:** will be in English (no interpretation will be provided).

**Follow up training:** The Workshops are aimed at training of trainers who on return to their Home Countries organize local seminars to train staff of the institutions concerned using the materials of the Workshop.

**Country papers:** participants from each country will be obliged to prepare and bring to the Workshop for presentation one joint "Country Paper": on the subject of the Workshop in relation to his/her country.

## Specific activities in the countries:

**A. Epidemiology:** up to three countries will be identified for immediate implementation of FAO's *TADinfo* data analysis software, with the assistance of the project co-ordinator, and with the approval of Chief Veterinary Officers of the countries concerned. The key to effective decision-making with respect to disease management lies in having a good disease data storage and analysis system; however, not all countries in the region would be able to start immediately with a computerised system.

**B. Laboratory Diagnosis:** in terms of laboratory facilities, Moldavia, Bosnia-Herzegovina and Albania require some assistance which will take the form of expert guidance on what is required for them to upgrade their laboratory facilities. The actual upgrading will be at the expense of national governments and will not be undertaken under this project.

**Expected results:**

- Regional expertise in epidemiology/surveillance will be boosted through training assignments, expert technical assistance and reciprocal exchange of expertise.

- The training of the countries' personnel in laboratory diagnosis will strengthen the national capability for rapid, accurate and comprehensive diagnosis of the epidemiological situation, which is essential for control of transboundary diseases.

- The sustainability of the Project will have to be achieved by the end of it (August 2002). Participating countries may look for the additional, complementary problems to be solved with the assistance of the external donors (to be advised).

**CENTAUR**

Linkage with the FAO Established the FAO Established Veterinary Biotechnology/Epidemiology Network for Central and Eastern Europe:

The Project will strengthen the epidemiology and diagnostic components in the participating countries. They

will be incorporated into the FAO Established Veterinary Biotechnology/Epidemiology Network for Central CEN-TAUR established under the TCP/RER/4551 Project: "Regional Training on Veterinary Biotechnology for Improved Control of Livestock and Poultry Diseases" for Czech Republic, Hungary, Poland and Slovakia from 1996–1998.

The internet Bulletin CENTAUR NEWS FLASH INFO–CNFI providing subscribers with a daily scientific/disease control related information related to 27 fields (which already has nearly 700 subscribers) will be offered to the 8 TCP/RER/0066 (T) Project's countries in English version.

As the command of English in the Region amongst veterinary professionals ranges differs from 2 to 40% some countries may consider to translate the CNFI into local language for distribution by the main server in the VRI Brno, Czech Republic or within the countries concerned.

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